PV Methods and Operator Submittal

Standard and Alternative Production Verification (PV) methods used by the Bureau of Land Management (BLM), and types of submittal requested from the operator for production accountability are described below.

1. Standard PV Methods

Field Inspections - During compliance inspections the specialist examines the operation for compliance with the established requirements. A visual estimate of the production is made to compare to the authorized volume. If the visual estimate differs significantly from the permitted volume then one of the other techniques should be employed. Inspection for trespass shall be an inherent part of the compliance inspection.

Pace and Compass - This technique is a quick approximation tool for making volume estimates. The accuracy of this technique is relatively low. An alternative technique should be employed if this method detects a discrepancy with reported volume and/or the operator disagrees with the findings.

Tape and Compass - For more exacting and detailed traverses, a tape should be used to measure pit dimensions and stockpiles. Most PV surveys utilize this method. The accuracy of this technique is also relatively low. An alternative technique should be employed if this method detects a discrepancy with reported volume and/or the operator disagrees with the findings.

_____ Alidade - The alidade and plane table are commonly used where terrain is flat to moderately rough and accuracy is important. This method is also more accurate than the tape and compass method.

_____ Transit - Pit dimensions requiring greater precision may be made with a transit and survey tape. If a potential trespass situation is noted, a survey crew should be utilized to make the final volume determination.

_____ Aerial Photography - Photogrammetric volume measurements may be made by stereo aerial photography. Pre- and post-aerial photography must be available for volume calculations.

_____ Computer Assisted Survey - A computer assisted theodolite may be used to perform surveys of sites both before and after disposal.

2. Alternative PV Methods

_____ Global Positioning System - The Global Positioning System in conjunction with software packages may be used for plotting and volumetric calculations for large disposal.

_____ End-Use Verification - Determination of the quantity used at the construction site (i.e.) road base, landscape rock, etc.) in comparison to reported production.

_____ New Developing Technology - Electronic scanning of truck traffic and other developing technologies that may be cost effective solutions for PV.

Factors to be considered in all of the above PV methods may include overburden, swell factor, weight versus volume, and waste (oversize and fines).

3. Operator Submittal

_____ Trip Tickets - Estimated volume or weight tickets completed by driver or loader operator and deposited in a secure box before exiting the site.

_____ Weight Tickets - The operator must provide copies of certified tally sheets derived from certified scales.

_____ Production Reports - A required operator submittal to provide production information during a specified reporting period. This report should include the contract number, quantity authorized, quantity and date removed, remaining balance, and signature of the operator's authorized representative.

_____ Pre- and Post-Surveys - Certified surveys of the site provided by the operator for determining pit dimensions and quantity removed.